



Trigeminal Nerve Related Diseases"- Fothergill's Disease"

Namariq Loai Abdulabbas ¹

Abstract

The current research is concerned with studying the trigeminal nerve and its effect if it suffers damage or inflammation on the human face, and studying one of its diseases, which is trigeminal neuralgia. Research Problem: Many people suffer from facial pain and severe headaches that lead them to commit suicide, and these are considered the main symptoms of this disease. Research Importance: Studying the most important and largest nerves in the human body and addressing a disease that is difficult to live with. Research goal: finding solutions and natural treatments to treat this disease. Research limits: starting on 4/26/2023 until 9/29/2023 at the University of Babylon / College of Medicine. Definition of search terms: Fothergill disease is a neurological disease that affects the trigeminal nerve and causes severe pain in the face. Regarding the disease, the symptoms of the disease, its diagnosis, and the most common categories of this disease will be discussed. It is treated in two ways: surgical intervention or through herbs and natural material. The results reached in the research: Most of the medications that have been discovered so far are pain relievers for this disease and not a cure. Research conclusions: Finding natural materials to treat the disease and alleviate its pain

Keywords: Diseases, Related, Trigeminal Nerve

الأمراض المرتبطة بالعصب الثلاثي التوائم " مرض فوثرجيل"
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المستخلص

يهتم البحث الحالي بدراسة العصب ثلاثي التوائم وتأثيره إذا أصيب بضرر أو التهاب في وجه الإنسان، ودراسة أحد أمراضه وهو ألم العصب ثلاثي التوائم. مشكلة البحث: يعاني الكثير من الأشخاص من آلام الوجه والصداع الشديد الذي يؤدي إلى دفعهم إلى الانتحار، وهذه تعتبر الأعراض الرئيسية لهذا المرض. أهمية البحث: دراسة أهم وأكبر الأعصاب في جسم الإنسان ومعالجة مرض يصعب التعايش معه. هدف البحث: إيجاد الحلول والعلاجات الطبيعية لعلاج هذا المرض. حدود البحث: يبدأ بتاريخ 2023/4/26 ولغاية 2023/9/29 في جامعة بابل / كلية الطب. تعريف مصطلحات البحث: مرض فوثرجيل هو مرض عصبي يصيب العصب ثلاثي التوائم ويسبب ألماً شديداً في الوجه. وفيما يتعلق بالمرض سيتم مناقشة أعراض المرض وتشخيصه والفئات الأكثر شيوعاً لهذا المرض. ويتم علاجه بطريقتين: التدخل الجراحي أو عن طريق الأعشاب والمواد الطبيعية. النتائج التي توصل إليها البحث: أغلب الأدوية التي تم اكتشافها حتى الآن هي مسكنات لهذا المرض وليست علاجاً له. استنتاجات البحث: إيجاد مواد طبيعية لعلاج المرض والتخفيف من آلامه.

الكلمات المفتاحية: امراض، مرتبطة، عصب خامس

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Introduction

Trigeminal neuralgia is named after the scientist who discovered it, John Fothergill, in 1773. It is considered a rare disease, affecting 12 people

every 100,000 people in the world, but it is considered one of the diseases that cause suicide for people with it due to its symptoms[1].

First Chapter:-

Trigeminal nerve:

The trigeminal nerve is the biggest and most complex of the 12 cranial nerves (CNs). It subserves sensations to the face, mucous membranes, and different buildings of the head. It is the motor nerve for the muscular tissues of mastication

Trigeminal nerve has three divisions [2]: as shown in figure (1)

- 1- ophthalmic division [V1] passes through superior orbital fissure orbit
- 2- maxillary division [V2] passes through foramen rotundum
- 3- mandibular division [V3] passes through foramen ovale

The areas of cutaneous distribution (dermatomes) of the three sensory branches of the trigeminal nerve have sharp borders with tremendously little overlap (unlike dermatomes in the relaxation of the body, which have good sized overlap) as shown in Figure (1).

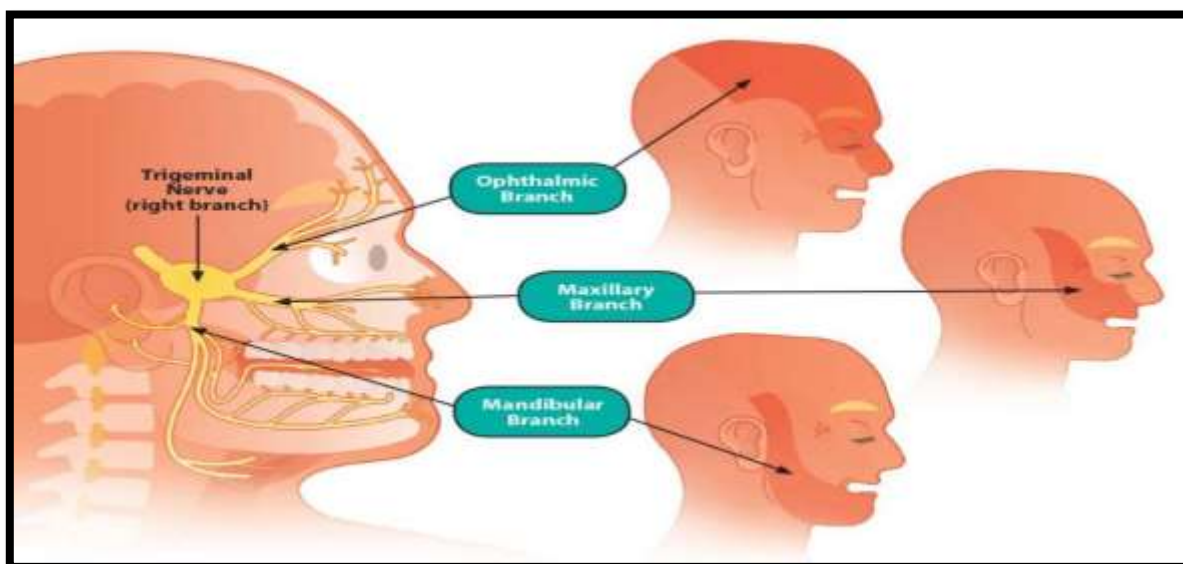


Figure (1): Trigeminal nerve and its three branches

Second Chapter :-

Fothergill’s disease "Trigeminal neuralgia":

Trigeminal neuralgia (TN), tic douloureux (also recognized as prosopalgia, the Suicide Disease or Fothergill’s disease) is a neuropathic health problem characterised by means of the usage of the usage of episodes of severe soreness in the face, originating from the trigeminal nerve. One, two, or all three branches of the nerve may additionally be affected. It is, "one of the most

painful stipulations identified to humans, but stays an enigma to many health professionals." This pain may additionally moreover be felt in the ear, eye, lips, nose, scalp, forehead, cheeks, teeth, and/or jaw and aspect of the face; some victims moreover time out ache in their left index finger. Trigeminal neuralgia (TN) is now not without issues managed and there is no cure. It is estimated that 1 in 15,000 humans go through from trigeminal neuralgia, even although the actual mom or father would possibly additionally additionally be substantially

larger due to broadly extensive misdiagnosis. In a majority of cases, TN signs and symptoms begin acting after the age of 50, even though there have been conditions with sufferers being as younger as three years of age. It is more accepted in girl than males. Figure (2)

Trigeminal neuralgia, additionally recognized as tic facial pain, reasons the trigeminal nerve to malfunction. The hassle is commonly a contact between a regular blood vessel, in this case an artery or vein, and the trigeminal nerve at the base of the brain. This contact locations stress on the nerve and reasons it to malfunction. Although compression of a blood vessel is one of the most

common causes of trigeminal neuralgia, there are additionally many one-of-a-kind possible causes. Some can additionally be related with higher than one sclerosis or a comparable ailment that damages the myelin sheath that protects some nerves. Trigeminal neuralgia might additionally additionally be precipitated with the useful resource of a tumor pressing on the trigeminal nerve. Some human beings may also additionally trip trigeminal neuralgia as a give up end end result of a Genius lesion or magnificent abnormality. In other cases, surgical or stroke accidents or injuries to the face may additionally additionally be the intent of trigeminal neuralgia[3]. as shown in Figure (2).



Figure (2) :Fothergill's disease "Trigeminal neuralgia"

What causes Fothergill's disease "Trigeminal neuralgia"?

Trigeminal neuralgia can be triggered by a blood vessel urgent against the nerve, or by demyelination in sufferers with MS. Infrequently, it may also be precipitated with the aid of a increase in the returned of the skull. In some patients, no purpose can be found [4].

Types of Trigeminal Neuralgia:

- 1- Typical Trigeminal Neuralgia
- 2- Atypical Trigeminal Neuralgia
- 3- Pre-Trigeminal Neuralgia
- 4- Multiple Sclerosis-Related Trigeminal
- 5- Secondary or Tumor Related Trigeminal Neuralgia
- 6- Trigeminal Neuropathy or Post-Traumatic Trigeminal Neuralgia

7- "Failed" Trigeminal Neuralgia.[5]

Symptoms of trigeminal neuralgia "Fothergill's disease" may include one or more of the following:

Episodes of sudden, severe, stabbing soreness that feels like an electric powered shock. Spontaneous bouts of agony or bouts triggered by means of certain actions such as touching the face, chewing, speakme or brushing the tooth Painful bouts that last for a few seconds or minutes Pain with spasms in the face Multiple bouts of ache that ultimate for days, weeks, months or longer, though some humans have periods barring feeling any suffering Pain in areas the area the trigeminal nerve is present, consisting of the cheek, jaw, teeth, gums, lips, or from time to time the eyes and brow Pain on one facet of the face at situations Pain that is focused in one factor or spreads greater extensively Pain that now not often takes area at night time whilst sound asleep Frequent episodes that get extra severe over time [6].

A range of triggers would possibly also cause the pain of trigeminal neuralgia, including: shaving, touching the face, eat the meals ,Drinking, Brushing teeth, speaking, Putting on cosmetics ,Expose the face to light air, smiling ,Facial Wash . figure (3) & figure (4) shows the symptoms & the areas of the face that the disease affects [3].

Diagnosis:

Fifth neuralgia is identified after except for all distinct motives that rationale similar soreness (herpes zoster, cancerous tumors, dental pain, and vascular infections). In most cases, magnetic resonance imaging (MRI) is performed. In the case of fundamental trigeminal neuralgia, there will be no brilliant pathological findings on imaging, and the results of the neurological examination that these victims bear are free of any problems. In instances the place the agony is secondary to every other pathological phenomenon (such as cancerous tumors), there may additionally additionally be extra findings evident throughout the neurological examination. [7] as shown in Figure (3).

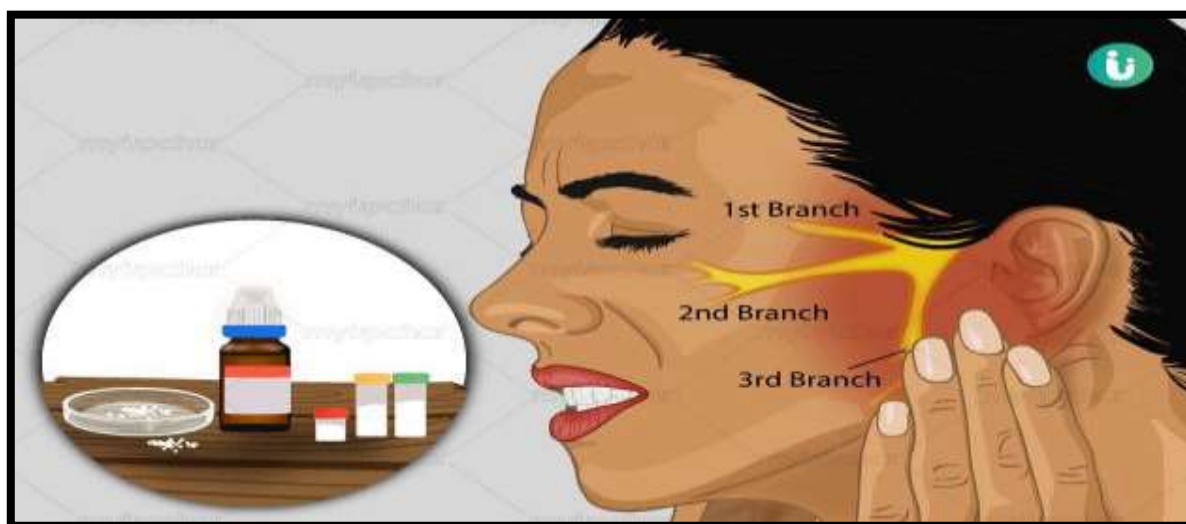


Figure (3) :Symptoms of trigeminal neuralgia "Fothergill's disease"

Trigeminal neuralgia is more common among the following categories:

In general, female are higher possibly to get contaminated than men. People over the age of

fifty. People with excessive blood pressure. People who come from a household whose scientific history includes previous infections. Although the suffering might also additionally moreover be severe, trigeminal neuralgia is no longer

considered a serious scientific condition, alternatively it is a sickness that might also additionally moreover get worse over time[8] as shown in Figure (4).

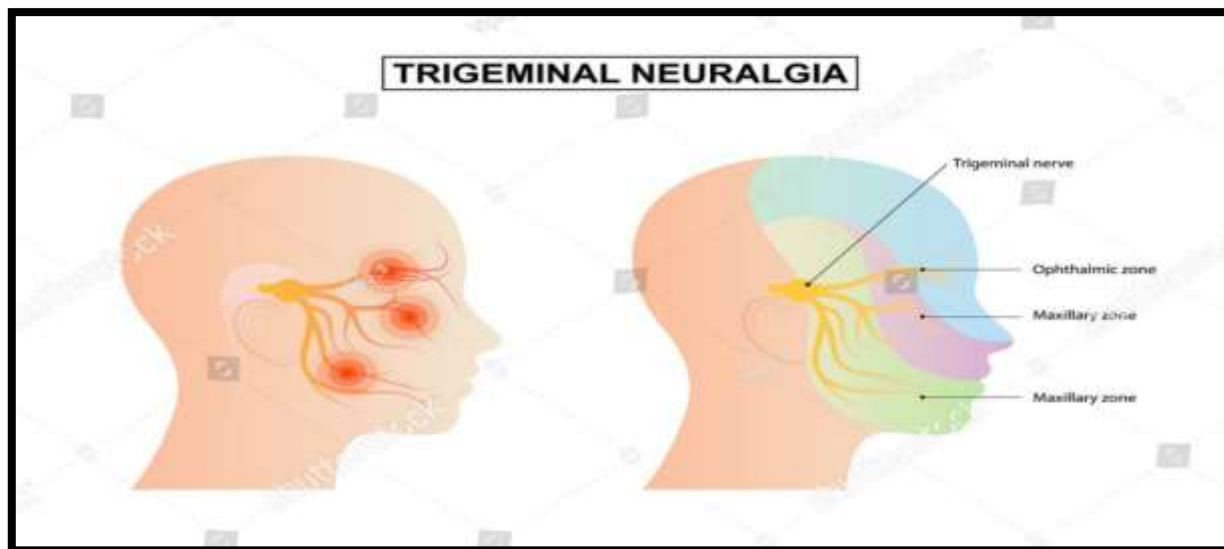


Figure (4) :Trigeminal neuralgia and the areas of the face it affects

Third Chapter:

“treatment”:

To deal with trigeminal neuralgia, a fitness practitioner will regularly prescribe medicines to limit or block struggling warning signs despatched to the brain. antispasmodics; Doctors in many situations prescribe carbamazepine (Tegretol, Carbatrol, others) for trigeminal neuralgia, and it has been shown to be extraordinary in treating this condition [9].

"Surgical":

Invasive methods include a close by injection into the cranial nerve exit of the fifth cranial nerve, or surgical therapy at the nerve exit of the brainstem. The injection approach consists of inflating a balloon, injecting glycerol, and radio wave

treatment for the nerve ganglion. The efficacy of specific injection remedies is similar, as are their complications. It is standard to provide these injections to victims who can not undergo operations. The surgical operation that is carried out to treat pain in the fifth cerebral nerve is regarded as Microvascular Decompression (MVD). During this operation, the skull is opened, revealing the nerve exit from the brainstem, and the artery urgent on it, and then a cotton-like fabric is inserted to separate them. In the considerable majority of cases, victims do now not sense any affliction after this procedure. Patients who deviate from this rule are victims with greater than one sclerosis, as their success charge of unique redress decreases in distinction to the rest of the patients [8]. as shown in Figure (5).

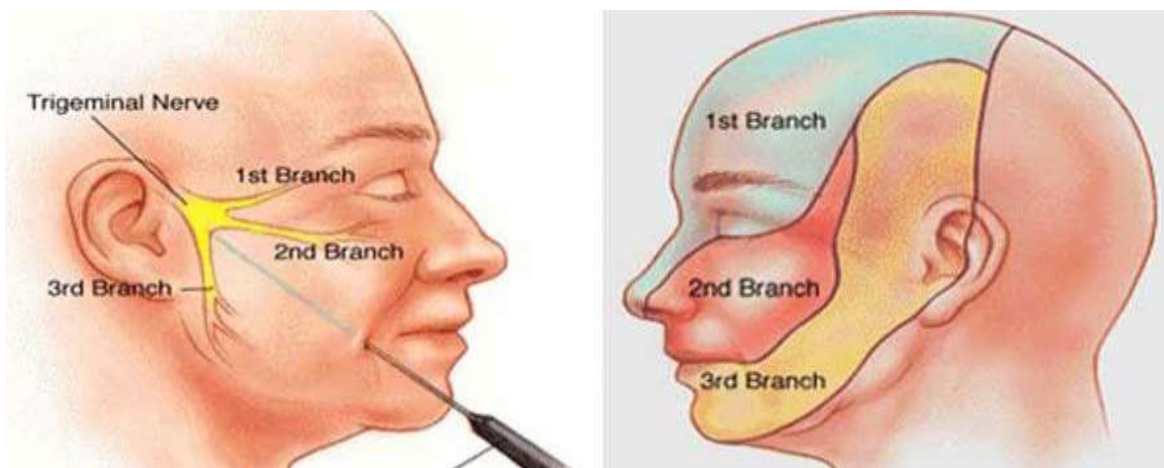


Figure (5) :Trigeminal nerve surgery

"Herbal treatment":

1- Chamomile:

Chamomile, and it is seen one of the herbs that come from flowers similar to the household of the Asteraceae plant, and it is native to West Asia and numerous areas in Europe, and its flowers are normally dried and used in medicinal treatments, and chamomile plant lifestyles comprise greater than one hundred twenty chemical compounds that make a contribution to its houses Medicinal anti-inflammatory Historical references factor out that the chamomile flower, which was once as soon as used with the aid of the historic Babylonians in many scientific treatments, can be used as an

choice remedy in the treatment of this disease. Recent studies, after many applications, have shown that chamomile flower has many advocated therapeutic properties, along with the following: Antioxidant properties. Anti-inflammatory properties. The discover out about concluded that “chamomile consists of many compounds that confer therapeutic advantages on it.” Some lookup have verified that chamomile has anti-inflammatory properties, which can also moreover make a contribution to relieving trigeminal neuralgia, but many research desire to be carried out to exhibit this. Figure (6) & figure (7) shows the Chamomile flower & Chamomile tea. [10] as shown in Figures (6) and (7).



Figure (6) :Chamomile flower



Figure (7) :Chamomile tea

2-"Ashwagandha or what is also called Indian ginseng and winter cherry, and is known scientifically as *Withania somnifera*."

The small bush of Ashwagandha with yellow plants is endemic to India and North Africa. Its roots and leaves are extracted or dried for use in medicinal treatments. The traits of this plant are prolonged due to the range of chemical elements present day In it, which consists of the following: alkaloids, steroidal lactones, saponins, and withanolides. In a examine about chiefly based totally absolutely on a case file carried out at Banaras Bindu University, in India in 2018 AD, to discover out the function of exquisite herbal plant life in the administration of trigeminal neuropathy, the reason was as soon as as follows: The analyze

about used to be carried out on a 50-year-old affected man or woman who suffers from pain in the side. the suited component of the face and will increase when touching the face. The affected man or woman used to be recognized with trigeminal neuralgia after current manner an MRI. The affected individual used to be once dealt with with a extent of herbs, alongside with ashwagandha, for two consecutive months. The penalties validated that instances of trigeminal neuralgia can be managed with the help of herbs. The penalties concluded that "herbs, together with Indian ginseng, can help manipulate the signs and symptoms and signs and symptoms of trigeminal neuralgia"[10]. as shown in Figure (8) and (9).



Figure (8) :Withania somnifera



Figure (9) : "Ashwagandha or what is also called Indian ginseng and winter cherry, and is known scientifically as *Withania somnifera*"

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